EXHIBIT 6

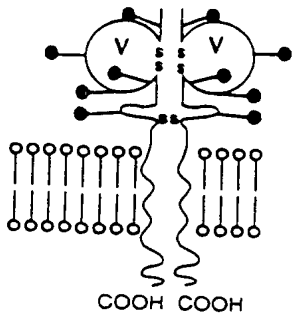
CD28 Tp44

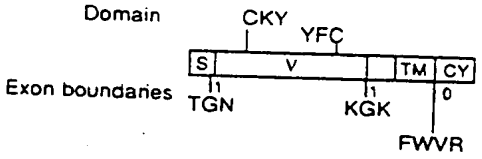
Molecular weights
Polypeptide 23085

SDS PAGE
reduced 44 kD
unreduced 90 kD

Carbohydrate
N-linked sites 5
O-linked unknown

Human gene location and size
2q33–q34; 36 kb [1]





Tissue distribution

CD28 is expressed on most T lineage cells and plasma cells [2]. Mature thymocytes have higher levels of CD28 than the immature cells and among peripheral T cells, 95% of $CD4^+$ cells and 50% of $CD8^+$ cells are positive [2]. Activation of T cells leads to enhanced CD28 expression [2].

Structure

CD28 is a member of the IgSF and is expressed as a disulphide-linked homodimer [2,3]. Human and mouse CD28 are 68% identical at the amino acid level [4]. CD28 is particularly similar to CTLA-4 with which it shares a ligand and probably a common ancestor in evolution [4].

Function

The ligand for CD28 is B7 [5,6] which is expressed on activated B cells, suggesting an important role for CD28 in the interaction between T and B cells. Activation of T cells via CD28 has provided evidence for a CD28 signalling pathway which involves stabilization of cytokine mRNA levels and is separate from that used by the TcR–CD3 complex [2,7].

Database accession numbers

	PIR	*SWISSPROT*	*EMBL/GENBANK*	*REFERENCE*
Human		P10747	J02988	3
Mouse			M34563	4
Rat			X55288	8

Amino acid sequence of human CD28

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MLRLLLALNL FPSIQVTG                                          -1
NKILVKQSPM LVAYDNAVNL SCKYSYNLFS REFRASLHKG LDSAVEVCVV        50
YGNYSQQLQV YSKTGFNCDG KLGNESVTFY LQNLYVNQTD IYFCKIEVMY       100
PPPYLDNEKS NGTIIHVKGK HLCPSPLFPG PSKPFWVLVV VGGVLACYSL       150
LVTVAFIIFW VRSKRSRLLH SDYMNMTPRR PGPTRKHYQP YAPPRDFAAY       200
RS                                                           202
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References

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4 Gross, J.A. et al. (1990) J. Immunol.144, 3201–3210.
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